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From: Hutchinson, Marcella
Sent: Tue 4/29/2014 3:49:35 PM
Subject: FW: [West Slope] Looking for diamond in the rough

FYI – innovative take on the situation

From: west-slope@googlegroups.com [mailto:west-slope@googlegroups.com] **On Behalf Of** Loretta Lohman
Sent: Saturday, April 26, 2014 2:08 PM
To: julie.annear@state.co.us; west-slope@googlegroups.com
Subject: [West Slope] Looking for diamond in the rough

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Looking for diamond in the rough

Crowdsourcing a solution to mine waste in Silverton



Photo by: JERRY McBRIDE/Durango Herald file photo

Walking in the so-called “kill zone” below the Red and Bonita Mine, Peter Butler, co-coordinator of the Animas River Stakeholders Group, sees water carrying high levels of metals that will flow into Cement Creek north of Silverton.

By Chase Olivarius-Mcallister Herald staff writer

SILVERTON – Last week, the regular meeting of the Animas River Stakeholders Group took on the feeling of a jolly, if intellectually fraught, Nobel Prize committee debate.

Scientists, government employees and mining officials huddled around a long table in the cold basement of the Miners Union Hospital grading innovative, sometimes preposterous proposals for addressing metal removal from mine drainage.

The ideas came from InnoCentive, a Boston firm that has hundreds of thousands of individual problem-solvers eager to take on challenges in chemistry, food production, business, engineering, information technology and the life sciences.

As part of the competition, the stakeholders described the environmental calamity in the Upper Animas Basin and offered \$45,000 to the top problem-solver. (They raised the prize money from 12 organizations, including the International Network for Acid Prevention, Freeport-McMorRan Copper and Gold, Sunnyside Gold Corp., National Mining Corp., Goldcorp, New Mexico Coal and Trout Unlimited.)

As water quality in the Animas River has deteriorated over the last seven years, there has been insufficient money to build and operate a limestone water-treatment plant, which would cost \$12 million to \$17 million to build and \$1 million to operate annually. Stakeholders are hoping that one brilliant solution could at least bring down the sticker price of river cleanup. (In the absence of an answer, the town is re-evaluating whether it should seek Superfund status.)

InnoCentive’s problem-solvers submitted online more than 50 proposals, with some more far-fetched than others, involving everything from absorption through plants, salting out metals, magnets, artificial river settling, cement, yeast, eggshell lime, plasma, brown coal, algae and Voraxial filtration.

Throughout the debate, cries of, “I like that one,” were countered with, “That wouldn’t work.”

As the stakeholders moved through the ideas, poring over a spreadsheet that had different stakeholders’ assessments of the schemes, expert opinion diverged many times.

While Kirsten Brown of the Colorado Division of Mining and Safety and Steve Fearn,

mining specialist and co-coordinator of the stakeholders' group, liked one proposal that involved removing heavy metals with magnets, Peter Butler thought "scaling and clogging would be an issue."

Butler, co-coordinator of the stakeholders' group, was more supportive of another proposal, artificial river settling, writing, "Could be an effective alternative to settling ponds. Separates metals somewhat."

His peers were less convinced.

Sunnyside's representative, Larry Perino, wrote "will not capture dissolved minerals." Fearn wrote "does not address dissolved salts." Brown wrote "Nah."

Brown rejected one proposed solution on the grounds the author had illustrated his engineering design on a paper napkin.

She assured the stakeholders that while many good ideas first came into the world on napkins, good ideas mature, finding fuller and more exact expression in a computer design program or on graph paper.

"We don't need that guy's help," she said, laughing.

They hope to choose the winner by May. When the winning idea might be implemented is unknown.

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